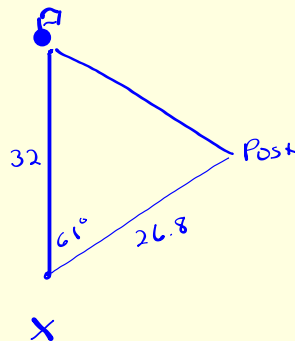


## Precalc Warm Up # 12-4

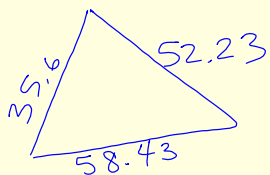
Find the largest angle in a triangle with side lengths 12 cm, 14 cm, and 25 cm.

## HW Questions, p. 304

2. Xiang is standing on level ground. Directly in front of him and 32 metres away is a flagpole. If Xiang turns  $61^\circ$  to his right, he sees a post box 26.8 metres in front of him. Find the distance between the flagpole and the post box.

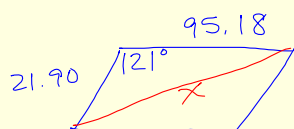


4



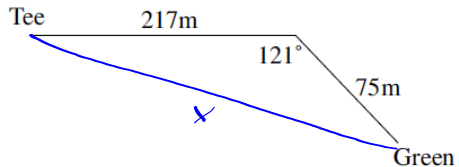
Use Law of Cosines

6.

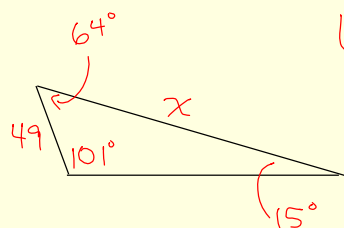


Use Law of Cosines

8. Use law of Cosines.  
Find the largest angle first.

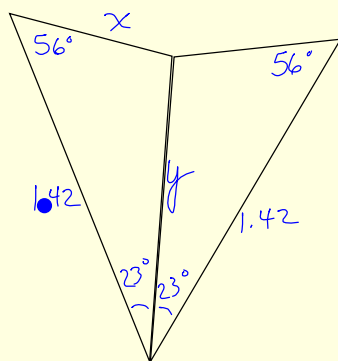
10. A golfer hits two shots from the tee to the green.  
How far is the tee from the green?
- 

12



Law of Sines

14.



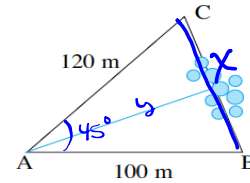
find  $x$  &  $y$  Law of Sines, then.

$$\text{length} = 2(1.42) + 2x + y$$

- 18.** A triangular region has been set aside for a housing development which is to be divided into two sections. Two adjacent street frontages, AB and AC measuring 100 m and 120 m respectively. With the 100 m frontage running in an easterly direction, while the 120 m frontage runs in a north-east direction. A plan for this development is shown alongside. Give all answers to the nearest metre.

(a) Find the area covered by the housing development.

During the development stages, an environmental group specified that existing trees were not to be removed from the third frontage. This made it difficult for the surveyors to measure the length of the third frontage.



(b) Calculate the length of the third frontage, BC.

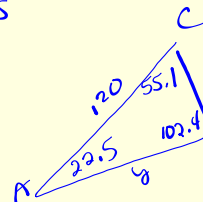
The estate is to be divided into 2 regions, by bisecting the angle at A with a stepping wall running from A to the frontage BC.

(c) How long is this stepping wall?

a)  $A = \frac{1}{2} (100)(120) \sin 45 = \dots$

b)  $x^2 = 120^2 + 100^2 - 2(120)(100) \cos 45$   
 $x \approx 86.2$  ~~STD~~  $\rightarrow X$

c)  $\frac{\sin C}{100} \approx \frac{\sin 45}{x}$   $C \approx 55.1$   
~~X~~



finish....

## Group Test: Triangle Solve

HW: Do the practice problem on the next slide. Look back through this week's homework. Finish and fix it up, then look over your notes to be ready for tomorrow.

Individual Test: SL 9.2, 9.4, 9.5

One more practice problem:

From home, Joe drives 16 miles due east, then heads  $258^\circ$  T for 7 miles. He stops for lunch, then puts his truck in 4-wheel drive and takes a direct line home. How far did he drive after lunch and what was his bearing from lunch to home?

Solution follows.

From home, Joe drives 16 miles due east, then heads  $258^\circ$  T for 7 miles. He stops for lunch, then puts his truck in 4-wheel drive and takes a direct line home. How far did he drive after lunch and what was his bearing from lunch to home?

